

We claim:

1. A method of treating a neurodegenerative immunological disorder, comprising administering to a mammal a therapeutically effective amount of BCMA, an antibody against a BCMA ligand, or an antibody against BCMA, thereby treating the disorder.
2. The method of claim 1, wherein the disorder is multiple sclerosis.
3. A method of treating demyelination in a mammal, comprising administering a therapeutically effective amount of BCMA, an antibody against a BCMA ligand, or an antibody against BCMA to the mammal, thereby treating demyelination, wherein the mammal has or is at risk for developing multiple sclerosis.
4. A method of treating CNS inflammation in a mammal, comprising administering a therapeutically effective amount of BCMA, an antibody against a BCMA ligand, or an antibody against BCMA to the mammal, thereby treating CNS inflammation, wherein the mammal has or is at risk for developing multiple sclerosis.
5. A method of reducing a CNS-specific autoantibody titer in a mammal, comprising administering a therapeutically effective amount of BCMA, an antibody against a BCMA ligand, or an antibody against BCMA to the mammal, thereby reducing the CNS-specific autoantibody titer wherein the mammal has or is at risk for developing multiple sclerosis.
6. The method as in any one of claims 1-5, wherein the mammal has or is at risk for diabetes.

7. The method as in any one of claims 1-5, wherein the mammal is human.

8. The method as in any one of claims 1-5, wherein the BCMA comprises a polypeptide comprising a ligand-binding domain of SEQ ID NO:1.

9. The method of claim 8, wherein the polypeptide comprises an amino acid sequence substantially identical to amino acids 1-51 of SEQ ID NO:1.

10. The method of claim 8, wherein the polypeptide comprises amino acids 8-41 of SEQ ID NO:1.

11. The method of claim 8, wherein the polypeptide comprises amino acids 1-51 of SEQ ID NO:1.

12. The method of claim 8, wherein the polypeptide comprises the amino acid sequence as in SEQ ID NO:3.

13. The method of claim 8, wherein the polypeptide comprises:

- (a) a portion of the amino acid sequence of SEQ ID NO:1; or
- (b) an amino acid sequence encoded by a nucleic acid that is at least 60 nucleotides long and hybridizes to the nucleic acid encoding (a) under defined conditions;

wherein the polypeptide is capable of specifically binding APRIL or BAFF, or both.

14. The method of claim 13, wherein the defined conditions comprise pretreating for 8 hours at 65°C in a solution comprising 6 x SSC, 50 mM Tris-HCl (pH 7.5), 1 mM EDTA, 0.02% PVP, 0.02% Ficoll, 0.02% BSA, and 500 µg/ml denatured salmon sperm DNA; hybridizing for 48 hours at

65°C; and washing for 1 hour at 37°C in a solution comprising 2 x SSC, 0.01% PVP, 0.01% Ficoll, and 0.01% BSA and for 45 minutes at 50°C in a solution comprising 0.1 x SSC.

15. The method of claim 8, wherein the polypeptide further comprises a Fc fragment of IgG1 or a Fc fragment of IgG4.

16. A method for identifying a compound effective for treatment of a neurodegenerative immunological disorder, the method comprising:

- (a) preparing a first binding mixture comprising the polypeptide as in claim 8 and a BCMA ligand;
- (b) measuring the amount of binding between the polypeptide and the BCMA ligand in the first mixture;
- (c) preparing a second binding mixture comprising the polypeptide and the BCMA ligand;
- (d) measuring the amount of binding between the polypeptide and the BCMA ligand in the second mixture; wherein difference in the amount of binding measured in (b) and (d) above a predetermined threshold is indicative of the test compound being effective for treatment of a neurodegenerative immunological disorder;
- (e) testing the compound identified in (d) in at least one animal model of multiple sclerosis.

17. A method of treating a subject in need for treatment of multiple sclerosis, the method comprising administering soluble BCMA to the subject

in an amount and for a period of time sufficient to delay onset of acute phase of the disease.

18. A method of treating a subject in need for treatment of multiple sclerosis, the method comprising administering soluble BCMA to the subject in an amount and for a period of time sufficient to reduce rate of relapses.

19. The method of claim 17 or 18, wherein the soluble BCMA comprises an amino acid sequence as set out in SEQ ID NO:3 from amino acid 24 to amino acid 74.

20. The method of claim 19, wherein the soluble BCMA further comprises an Fc region of human Ig.

21. Use of BCMA, an antibody against a BCMA ligand, or an antibody against BCMA in preparation of a pharmaceutical for treatment of a neurodegenerative immunological disorder.

22. Use of a nucleic acid encoding BCMA in preparation of a pharmaceutical for treatment of a neurodegenerative immunological disorder.

23. The use of claim 21 or 22, wherein the disorder is multiple sclerosis.